

SQL programmers be like



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ASSIGNMENT 2

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Part 1

RDBMS stands for “Relational Database Management system” and is a DBMS that is specially build for relational databases. RDBMS is a subset of DBMS. There are different RDBMS, things that set them apart and what their biggest advantages are of using them (help 2021).

RDBMS	Advantages and differences	Why they are better than DBMS
Microsoft SQL Server	High security features (G2 2021). Installation is easy and has a lower cost of ownership (Nagy 2018).	
MySQL	MySQL is open source (G2 2021). On demand scalability and round-the-clock uptime (Branson 2016).	
Oracle Database	Customers have lower IT costs while having a higher quality of service (G2 2021). Easy point-in-time recovery and multiple database support (Singh 2020).	
IBM DB2	Easy to deploy and can easily integrate with many platforms (G2 2021). It has a built in task scheduler that can prioritizing and run multiple jobs at the same time (Weaknesses 2019).	
Amazon Aurora	Combines the speed and quality of high-end databases while being open-source (G2 2021). Amazon Aurora has great availability and durability, and replicates the database between multiple availability zones (Flair 2020).	

Figure 1: RDBMS and their advantages and what makes them better than DBMS

Part 2

Question 1

Select * from genre;

Question 2

Drop table Artist;

Question 3

```
CREATE TABLE AlbumSales (  
    ArtistId int FOREIGN KEY REFERENCES Artists (ArtistId),  
  
    AlbumId int FOREIGN KEY REFERENCES Artists (ArtistId),  
    NumberOfSales int,  
    Genre varchar(255),  
  
    Primary Key (ArtistId, AlbumId)  
);
```

Question 4

select * from Albums where year(DateReleased) = 2020

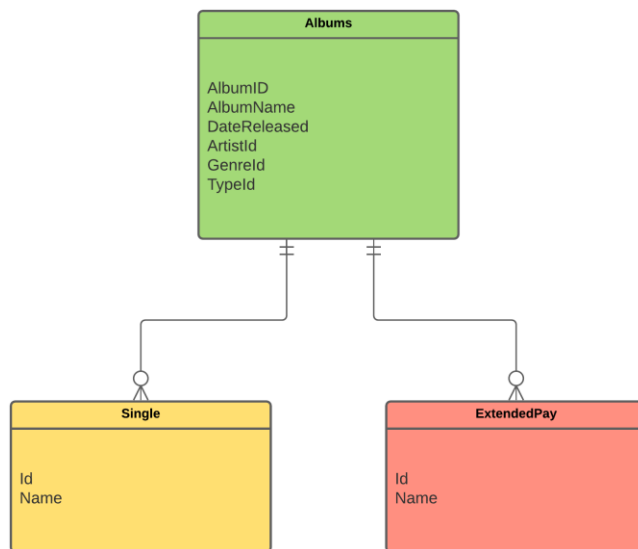
Question 5

```
CREATE TABLE Albums (  
    AlbumId int,  
    AlbumName varchar(255),  
    DateReleased DateTime,  
  
    ArtistId int PRIMARY KEY  
);
```

Depending on how the table Genre is set up, it will either throw an error because there is a relationship between the two entities, or all related rows in the genre tables will be deleted (on cascade delete).

The 4 options are No Action, Cascade, SET NULL or SET Default. Depending on the child table.

Question 6



An overlapping constraint happens when the same entity contains two subclasses. In this example the album entity can be split up into two entities names single or extendedPlay.

Question 7

```
CREATE TABLE AlbumSales (  
    ArtistId int FOREIGN KEY REFERENCES Artists (ArtistId),  
  
    AlbumId int FOREIGN KEY REFERENCES Artists (ArtistId),  
    NumberOfSales int,  
    Genre varchar(255),  
  
    Primary Key (ArtistId, AlbumId)  
);
```

```
CREATE TABLE Albums (  
    AlbumId int,  
    AlbumName varchar(255),  
  
    DateReleased DateTime,  
  
    ArtistId int FOREIGN KEY REFERENCES Artists (ArtistId),  
  
    GenreId int FOREIGN KEY REFERENCES Genre (GenreId),  
  
    PRIMARY KEY (AlbumId),  
);
```

```
CREATE TABLE Genre (  
    GenreId int,  
    Genre varchar(255),  
  
    Primary key (GenreId)  
);
```

```
CREATE TABLE Artist (  
    ArtistId int,  
    ArtistName varchar(255),  
  
    Primary key (ArtistId)  
);
```

```
CREATE TABLE ExtendedPlay (  
  
    EPId int,  
    ArtistId int FOREIGN KEY REFERENCES Artists (ArtistId),  
  
    DateReleased DateTime,  
  
    Genre varchar(255),  
  
    PRIMARY KEY (EPId),  
);
```

Question 8

There would be a one-to-one relationship with Albums, because one album will have one record sales. AlbumId will be the foreign pointing to Albums.

Question 9

```
CREATE VIEW [Artists View] AS  
SELECT *  
FROM Artists
```

References

Branson, T. (2016). "8 Major Advantages of Using MySQL." from <https://www.datamation.com/storage/8-major-advantages-of-using-mysql/>.

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